

IN THE CLAIMS:

Claims 1, 2 (previously canceled)

Claim ¹~~3~~ (currently amended) A circuit substrate unit for mounting a circuit element, which comprises:

a plurality of circuit substrates, each of which mounts a circuit element thereon; and
at least one heat sink member;

wherein at least one of said plurality of circuit substrates is stacked on one of the circuit substrates adjacent thereto with a space therebetween and

²¹ said heat sink member is arranged in the space formed between said adjacent circuit substrates and

wherein said heat sink member has a plurality of frustoconically-shaped protruding portions on at least one plane facing one of said adjacent circuit substrates which sandwich said heat sink member therebetween, and

a circuit element arranged on a plane of the one adjacent circuit substrate facing said heat sink member and being mounted on the circuit substrate in a state where the circuit element contacts with at least one of said plurality of frustoconically-shaped protruding portions.

Claim ²~~4~~ (original) The circuit substrate according to claim ¹~~3~~, further comprising:

a heat conduction member,

wherein said heat conduction member is disposed between said circuit element which needs to be cooled and said heat sink member.

³
~~Claim 5~~ (original) The circuit substrate according to claim ²~~4~~,

wherein said heat conduction member is disposed between a plane of said heat sink member which plan has no protruding portions and said circuit element which needs to be cooled, the circuit element being disposed on a plane of said circuit substrate which faces the plane of said heat sink.

⁴
~~Claim 6~~ (original) The circuit substrate unit according to claim ²~~4~~,

^{C1} wherein said heat conduction member is formed in a sheet shape, and has elasticity at least in a thickness direction thereof.

⁵
~~Claim 7~~ (original) The circuit substrate according to claim ¹~~3~~,

wherein each of said protruding portions has a flat surface on a tip end thereof.

⁶
~~Claim 8~~ (previously amended) The circuit unit according to claim ¹~~3~~,

wherein others of said plurality of protruding portions are arranged to make no contact with the circuit element mounted on the circuit substrate facing the protruding portions.

⁷
~~Claim 9~~ (previously amended) The circuit substrate unit according to claim ¹~~3~~,

wherein said heat sink member has a radiation fin partially provided therein.

~~Claims 10, 11 (canceled)~~

¹⁶
Claim ~~12~~ (previously amended) The circuit substrate according to claim ~~24~~¹⁵, further comprising:

heat conduction members,

wherein said circuit element to serve as the first heat source and said circuit element to serve as the second heat source respectively contact with said heat sink member via said heat conduction members, and

the heat conduction member with which said circuit element to serve as the first heat source contacts and the heat conduction member with which said circuit element to serve as the second heat source contacts are heat conduction members with different heat conductivity.

c/ ¹⁷
Claim ~~13~~ (original) The circuit substrate according to claim ~~12~~¹⁶,
wherein each of said heat conduction members is formed in a sheet shape and has elasticity at least in a thickness direction thereof.

¹⁸
Claim ~~14~~ (currently amended) The circuit substrate unit according to claim ~~24~~¹⁵,
wherein a heat pipe is provided in that region of said heat sink member with which said heat conduction member contacts.

¹⁹
Claim ~~15~~ (currently amended) The circuit substrate unit according to claim ~~24~~¹⁵,
wherein ~~said second circuit substrate has, mounted thereon, a circuit element to serve as a~~
~~third heat source,~~
said shield member has a through hole therein, and

said circuit element to serve as the third heat source contacts with said heat sink member via said through hole.

²⁰
Claim 16 (previously amended) The circuit substrate unit according to claim ¹⁵~~14~~,
wherein said radiation fin is constituted by a plurality of fins, each of which has a side parallel to said heat sink member.

⁸
Claim 17 (currently amended) Electronic equipment comprising
a circuit substrate unit having:

a first circuit substrate;

a second circuit substrate;

a heat sink member; and

an electronic shield member;

a circuit element on said first circuit substrate serving as a first heat source,

a circuit element on said second circuit substrate serving as a second heat source,

a radiation fin on a plane of said heat sink member facing the second circuit substrate, and

a plurality of frustoconically-shaped protruding portions on the plane of said heat sink member facing the second circuit substrate;

wherein said first circuit substrate and said second circuit substrate sandwich said heat sink member and said electromagnetic shield member therebetween; and

wherein said circuit element to serve as a second heat source contacts with said heat sink member via at least one of the plurality of frustoconically-shaped protruding portions provided on the plane facing the second circuit substrate.

⁹
Claim 18 (currently amended) Electronic equipment comprising the circuit substrate unit according to claim ⁸~~17~~, said circuit substrate unit further comprising:

~~a circuit element on said first circuit substrate serving as a first heat source;~~
~~a circuit element on said first circuit substrate serving as a second heat source;~~
~~a radiation fin on a plane of said heat sink member facing the second circuit substrate;~~
~~a plurality of protruding portions on the plane of said heat sink member facing the second circuit substrate; and~~
a hood portion,
wherein said hood portion is disposed at a position above said radiation fin so as to cover the radiation fin.

¹⁰
Claim 19 (original) The electronic equipment according to claim ⁹~~18~~,
wherein a casing accommodating constituent components of the electronic equipment has an upper casing, a lower casing, and a plate member partitioning said upper and lower casings,
and

said circuit substrate unit is accommodated in the lower casing, and said hood portion is provided in said plate member.

¹¹
Claim 20 (original) The electronic equipment according to claim ¹⁰~~19~~, further comprising:

a cooling fan,
wherein said hood portion has an opening portion facing one plane of said casing, and
a ventilation port is provided on the plane of said casing facing the opening portion of
said hood portion, and said cooling fan is provided at a position abutting on a plane facing the
plane of said casing.

¹²
Claim ~~21~~ (original) The electronic equipment according to claim ⁸~~17~~,

wherein a casing accommodating constituent components of the electronic equipment has
an upper casing, a lower casing and a plate member partitioning the upper and lower casings, and
said circuit substrate unit is accommodated in the lower casing, and said plate member
has a through hole therein for allowing an upper portion of said radiation fin to protrude to said
upper casing.

¹³
Claim ~~22~~ (original) The electronic equipment according to claim ¹⁰~~19~~ or ¹²~~21~~,

wherein said circuit substrate unit is disposed in a region on one of left and right sides of
said lower casing.

¹⁴
Claim ~~23~~ (original) The electronic equipment according to claim ¹³~~22~~, comprising:
a space for accommodating related apparatuses,

wherein said space is provided in the other region of said lower casing where said circuit
substrate unit is arranged.

¹⁵
Claim ~~24~~ (currently amended) A circuit substrate unit comprising:

a first circuit substrate,
a second circuit substrate;
a heat sink member; and
an electromagnetic shield member;
wherein said first circuit substrate and said second circuit substrate sandwich said heat sink member and said electromagnetic shield member therebetween;
wherein said first circuit substrate having, mounted thereon, a circuit element to serve as a first heat source and a circuit element to serve as a second heat source; and
wherein a radiation fin and a plurality of frustoconically-shaped protruding portions are provided on a plane of said heat sink member facing the second circuit substrate;
c/ wherein said second circuit substrate has, mounted thereon, a circuit element to serve as a third heat source, and circuit element to serve as a third heat source contacts with said heat sink member via at least one of said plurality of frustoconically-shaped protruding portions provided on the plane facing the second circuit substrate.

²¹
Claim ~~25~~ (New) The circuit substrate unit of claim ¹⁵~~24~~, said radiation fin comprising a plurality of trapezoidal fins in a comb-like arrangement in the vicinity of an edge of said heat sink member.

²²
Claim ~~26~~ (New) The circuit substrate unit of claim ¹⁵~~24~~, further comprising a plurality of second frustoconically-shaped protruding portions on the plane of said heat sink member facing the second circuit substrate, ones of said plurality of second frustoconically-shaped protruding portions contacting and retaining said second circuit substrate at a position enabling said third

heat source to contact at least one of said plurality of frustoconically-shaped protruding portions
of said heat sink member.
